



**[4910-13-P]**

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2013-0018; Directorate Identifier 2010-SW-060-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; Eurocopter Deutschland GmbH Helicopters**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for Eurocopter Deutschland GmbH (Eurocopter) Model MBB-BK 117 C-2 helicopters. This proposed AD would require determining if a certain serial-numbered bevel gear is installed in the tailrotor intermediate gear box (IGB). If such a bevel gear is installed in the IGB, this AD would require recording the bevel gear's reduced life limit in the Airworthiness Limitations section of the maintenance manual and on the component history card or equivalent IGB record. If the bevel gear's life limit has been reached or exceeded, this AD would require, before further flight, replacing the bevel gear with an airworthy bevel gear. This proposed AD is prompted by the discovery that the tooth foot fillets in certain bevel gears fell below the minimum dimensions required in the design documents to ensure safe functioning of the bevel gear until reaching its approved life limit. The proposed actions are intended to prevent failure of a bevel gear before reaching its currently approved life limit, failure of the IGB, and subsequent loss of helicopter control.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments by any of the following methods:

- Federal eRulemaking Docket: Go to <http://www.regulations.gov>. Follow the online instructions for sending your comments electronically.

- Fax: 202-493-2251.

- Mail: Send comments to the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590-0001.

- Hand Delivery: Deliver to the “Mail” address between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at the Docket Operations Office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the economic evaluation, any comments received, and other information. The street address for the Docket Operations Office (telephone 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

For service information identified in this proposed AD, contact American Eurocopter Corporation, 2701 N. Forum Drive, Grand Prairie, TX 75052; telephone (972) 641-0000 or (800) 232-0323; fax (972) 641-3775; or at <http://www.eurocopter.com/techpub>. You may review the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd.,

Room 663, Fort Worth, Texas 76137.

**FOR FURTHER INFORMATION CONTACT:** Chinh Vuong, Aviation Safety Engineer, Safety Management Group, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5110; email [chinh.vuong@faa.gov](mailto:chinh.vuong@faa.gov).

**SUPPLEMENTARY INFORMATION:**

**Comments Invited**

We invite you to participate in this rulemaking by submitting written comments, data, or views. We also invite comments relating to the economic, environmental, energy, or federalism impacts that might result from adopting the proposals in this document. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. To ensure the docket does not contain duplicate comments, commenters should send only one copy of written comments, or if comments are filed electronically, commenters should submit only one time.

We will file in the docket all comments that we receive, as well as a report summarizing each substantive public contact with FAA personnel concerning this proposed rulemaking. Before acting on this proposal, we will consider all comments we receive on or before the closing date for comments. We will consider comments filed after the comment period has closed if it is possible to do so without incurring expense or delay. We may change this proposal in light of the comments we receive.

**Discussion**

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA AD No. 2010-0096, dated

May 25, 2010, to correct an unsafe condition for Eurocopter Model MBB-BK 117 C-2 helicopters. EASA advises that during a recent review of the production documents for the bevel gears of the IGB, it was discovered that certain production batch numbers have tooth foot fillets below the required minimum values that would ensure the approved life limits for this part.

#### **FAA's Determination**

These helicopters have been approved by the aviation authority of Germany and are approved for operation in the United States. Pursuant to our bilateral agreement with Germany, EASA, its technical representative, has notified us of the unsafe condition described in its AD. We are proposing this AD because we evaluated all known relevant information and determined that an unsafe condition is likely to exist or develop on other products of the same type design.

#### **Related Service Information**

Eurocopter has issued Alert Service Bulletin No. MBB BK117 C-2-04A-005, Revision 2, dated April 28, 2010 (ASB). The ASB specifies determining whether certain serial-numbered bevel gears are installed in the IGB. The ASB specifies recording the reduced life limit for each affected bevel gear on the log card of the IGB and on the list of life-limited parts. If a bevel gear has one of the serial numbers listed in Table 1 of the ASB, the ASB specifies filling out a reply form and copying and sending it to Eurocopter. The ASB also specifies sending the IGB to a certified overhaul facility for replacing the bevel gear if it has reached or exceeded its life limit. EASA classified this ASB as mandatory and issued AD No. 2010-0096, dated May 25, 2010, to ensure the continued airworthiness of these helicopters.

## **Proposed AD Requirements**

This proposed AD would require, within 30 days after the effective date of this AD:

- Determining if a certain part-numbered and serial-numbered bevel gear is installed in the IGB, and recording the reduced life limit of the bevel gear on the component history card or equivalent record of the IGB.
- If the bevel gear life limit has been reached or is exceeded, before further flight, replacing the bevel gear with an airworthy bevel gear.
- Revising the Airworthiness Limitations section of the maintenance manual by reducing the retirement life for each IGB bevel gear, part number (P/N) 4639 310 065, having a serial number listed in Table 1 of the ASB, to the life limit listed in Table 1 of the ASB.

## **Differences between this Proposed AD and the EASA AD**

This proposed AD does not require sending a copy of the form in the ASB to the manufacturer. This proposed AD does not require sending the IGB to an overhaul facility. Also, this proposed AD does not specify a single ferry flight not to exceed 20 hours time-in-service to a maintenance facility if the bevel gear has exceeded the reduced life limit.

## **Costs of Compliance**

We estimate that this proposed AD would affect 107 helicopters of U.S. registry and that the labor rate would average \$85 per work-hour. We also estimate that it would take about a half hour to determine whether the IGB is affected and to enter the reduced life limit on the component history card or the equivalent record and to revise the

Airworthiness Limitations section of the maintenance manual. Based on these figures, we estimate that the cost per helicopter would total about \$43, about \$4,601 for the U.S. fleet.

### **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed, I certify this proposed regulation:

1. Is not a "significant regulatory action" under Executive Order 12866;

2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);

3. Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction; and

4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared an economic evaluation of the estimated costs to comply with this proposed AD and placed it in the AD docket.

#### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by Reference, Safety.

#### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

**EUROCOPTER DEUTSCHLAND GmbH HELICOPTERS:** Docket No. FAA-2013-0018; Directorate Identifier 2010-SW-060-AD.

**(a) Applicability.**

This AD applies to Model MBB-BK 117 C-2 helicopters with a bevel gear, part number (P/N) 4639 310 065, installed in the tail rotor intermediate gear box (IGB), P/N 4639 002 007, certificated in any category.

**(b) Unsafe Condition.**

This AD defines the unsafe condition as failure of a bevel gear, failure of the tail rotor IGB, and subsequent loss of control of the helicopter.

**(c) Compliance.**

You are responsible for performing each action required by this AD within the specified compliance time unless it has already been accomplished prior to that time.

**(d) Required Actions.**

Within 30 days, do the following:

(1) Determine if a bevel gear with a serial number (S/N) listed in Table 1 of Eurocopter Alert Service Bulletin MBB BK117 C-2-04A-005, Revision 2, dated April 28, 2010 (ASB), is installed in the IGB.

(i) If a bevel gear listed in Table 1 of the ASB is installed in the IGB, record the reduced life limit of the bevel gear onto the component history card or equivalent record of the IGB.

(ii) If the bevel gear life limit has been reached or is exceeded, before further flight, replace the bevel gear with an airworthy bevel gear.

(2) Revise the Airworthiness Limitations section of the maintenance manual by reducing the retirement life for each IGB bevel gear, P/N 4639 310 065, that has a S/N listed in Table 1 of the ASB to the life limit corresponding to that S/N.



**(e) Alternative Methods of Compliance (AMOCs).**

(1) The Manager, Safety Management Group, FAA, may approve AMOCs for this AD. Send your proposal to: Chinh Vuong, Aviation Safety Engineer, Safety Management Group, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5110; email [chinh.vuong@faa.gov](mailto:chinh.vuong@faa.gov).

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, we suggest that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office before operating any aircraft complying with this AD through an AMOC.

**(f) Additional Information.**

The subject of this AD is addressed in European Aviation Safety Agency AD 2010-0096, dated May 25, 2010.

**(g) Subject.**

Joint Aircraft Service Component (JASC) Code: 6520, Tail Rotor Gearbox.

Issued in Fort Worth, Texas, on January 9, 2013.

Kim Smith,

Directorate Manager, Rotorcraft Directorate,  
Aircraft Certification Service.